

ABSTRACT

Encryption is carried out based on a non field, non group algebraic structure. Preferably the algebraic structure is at least one of non-associative or non-commutative. An embodiment is described in which the algebraic structure is a crossed inverse quasigroup. A crossed inverse quasigroup can be a very large quasigroup e.g. of size 10^{10} . Either the quasigroup itself, or rules for calculating the values in the quasigroup can be distributed.

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